

PEAKSAVER TRANSITION

Demand Response Working Group

April 6, 2017

Overview

- This presentation is intended to facilitate discussion regarding the transition of the *peaksaver* PLUS (“*peaksaver*”) program to the energy market
- At the March 6th DRWG meeting, members agreed to the inclusion of the transition of the *peaksaver* program as a high priority item in the 2017 DR work plan
- Through the DRWG, the IESO will work with stakeholders to address any outstanding challenges to the integration of *peaksaver* resources into the DR Auction and energy market

Goal for *peaksaver* Resources

- The DR Auction continues to be the primary mechanism to select the lowest cost set of DR resources
- It is the goal of the IESO to facilitate the participation of *peaksaver* resources in the DR Auction after termination of the program, while reducing barriers to their participation in the energy market

peaksaver Background

- Originally developed in 2005 and evolved to a province-wide program offered by over 50 LDCs
- Over 300,000 load control devices were funded; 2/3 are programmable thermostats and 1/3 are older load control switches
- Primarily residential air conditioning
- Devices cycle power to appliances on hottest days of the year (May 1- September 30, 12pm to 7 pm)
- Devices controlled through the pager network with one way communication

Initial Stakeholder Feedback

2016 – *peaksaver* PLUS program review¹

- The DR Auction has operating and administrative characteristics/requirements that differ from the *peaksaver* program
- Legacy technology may have limited value

2017 - DRWG

- There has been a significant investment in *peaksaver* devices; this investment should be recognized, and a transition approach should be brought forward

¹<http://www.ieso.ca/sector-participants/engagement-initiatives/engagements/completed/peaksaverplus-program-review>

Residential DR Resources in the DR Auction

- In 2016, the DRWG and the IESO enabled Residential DR participation in the DR Auction:
 - M&V:
 - Residential DR stakeholders advised the historical 15/20 baseline not reflective of residential load so a randomized controlled trial baseline similar to the existing *peaksaver* evaluation was developed
 - Administrative:
 - contributor data & measurement data requirements have been streamlined
 - hourly data is acceptable for RDR

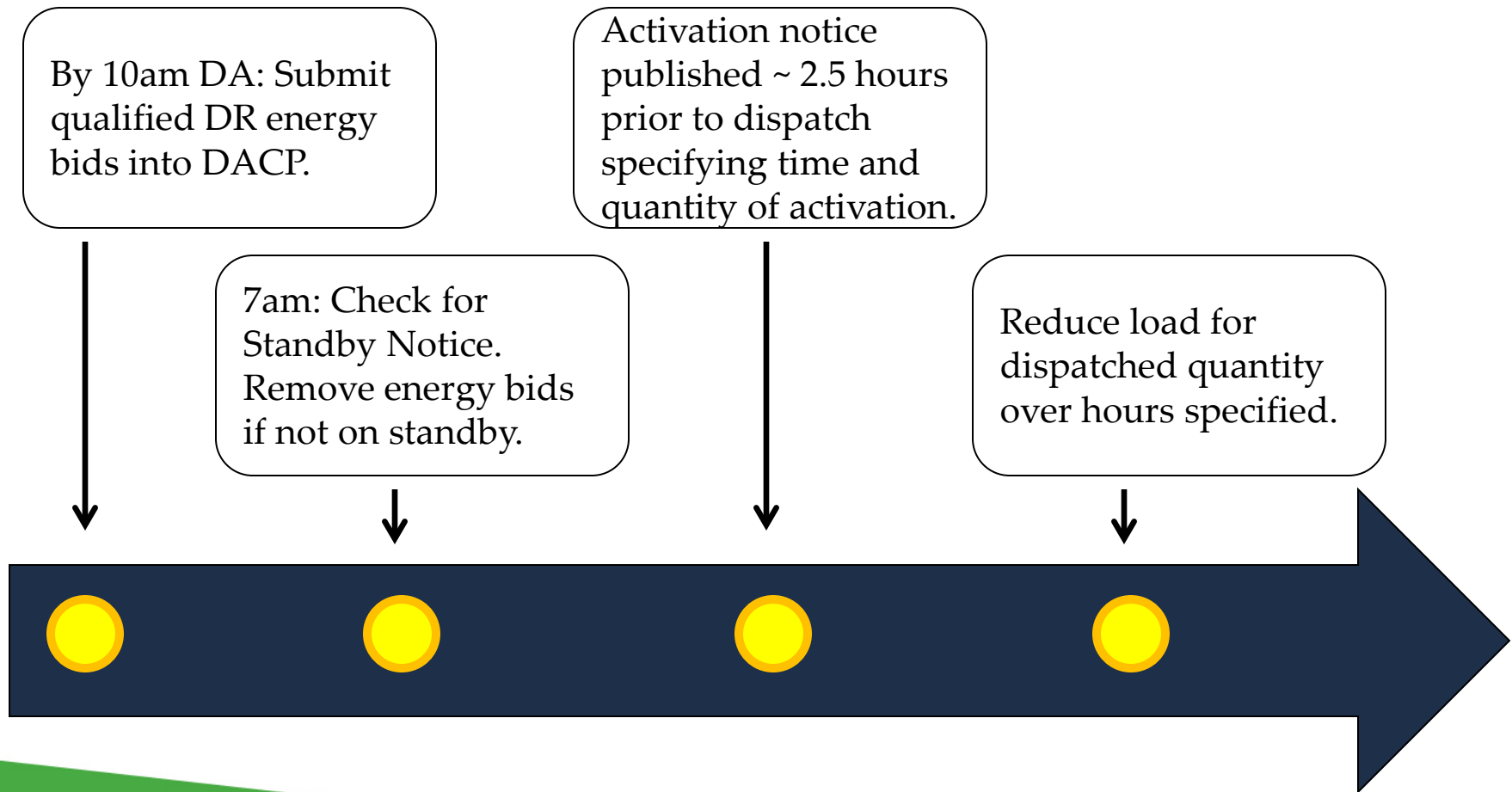
Requirements of Residential HDR Resources

- Participants that clear the DR Auction with a DR Capacity Obligation (DRCO) must become DR Market Participants (DRMP) and must register a new virtual Residential Hourly DR (HDR) resource to deliver into the energy market
- Participants will meet a DRCO by signalling DR Availability through hourly energy market bids (price/quantity) over the Availability Window:
 - Summer Commitment Period: business days 12:00-21:00 EST
 - Winter Commitment Period: business days 16:00-21:00 EST

Requirements of Residential HDR Resources

- Hourly bids for HDR resources are required to be submitted into the Day-ahead Commitment Process (prior to 10 am day-ahead) and maintained in real-time
- HDR resource energy bid prices must be $> \$100$ and $< \text{MMCP}$ ($\$2,000$) to qualify
- DR is activated when the HDR resource is economically scheduled
- DR activations are currently for four (4) hour blocks during the Availability Window up to the bid quantity; this activation block is under review in 2017

HDR Energy Market Participation Timeline



Requirements of Residential HDR Resources

- DRMPs must register contributors for aggregated virtual resources at least 14 business days before start of the commitment period and update information monthly
 - Excel file: contributor address, host LDC, LDC account # and identification of new control group contributors (min. 350)
 - Data: number of contributors in the control group, number of contributors in the treatment group, and DR capacity for the month (MW) for the treatment group
- To measure performance, DRMPs submit actual hourly measurement data for each activation:
 1. aggregated control group consumption, and
 2. aggregated treatment group consumption

Market Manuals and Reference Materials

- Market Manuals 1.2, 5.5 and 12 have been updated for Residential DR effective April 1, 2017:

<http://www.ieso.ca/Pages/Participate/Market-Rules-and-Manuals-Library.aspx>

- DR Auction Workbook will be updated by May 1, 2017:

<http://www.ieso.ca/sector-participants/market-operations/marketplace-training/training-materials>

Potential Issues for *peaksaver*

Participation in the Energy Market

The IESO recognizes that there are potential issues, which can be discussed through the DRWG; for example:

- access to devices for activation (pager network)
- requirements for customer consent and participation agreements
- activation criteria through the energy market
- duration of the summer commitment period and availability window
- combining *peaksaver* and non-*peaksaver* devices in a single resource to meet 1 MW minimum size
- consideration of commercial *peaksaver* devices

Peaksaver Transition - Next Steps

- There are no plans to continue to fund device maintenance after summer 2017; effective Jan 1, 2016, the program stopped installation of new devices and entered maintenance-only mode
- The IESO is currently addressing final costs under the program, and contractual changes terminating the program will be effective at the end of the summer period
- Details of a transition plan will be finalized in Q3 2017

Discussion

- The IESO intends to consider stakeholder feedback and make a recommendation for transitioning *peaksaver* resources to the market
 - What opportunities do you see for *peaksaver* resources?
 - What are the limitations for these resources?
- Are there additional considerations for the transition of *peaksaver* resources?
- The IESO is requesting initial stakeholder feedback by April 21, 2017